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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,870	10/30/2003	Shoji Kano	117638	6694

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EXAMINER

PATEL, VINOD D

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/695,870	KANO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Vinod D. Patel	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/22/04, 4/8/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED OFFICE ACTION**

### **INTRODUCTION**

1. This application/control number 10/695,870 has been examined. This is final action on the merits of the claimed invention. The application has claims 1-19 pending.

#### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the variation in a shape of a concentric circle as claimed in claim 2 and volume resistivity may be varied as claimed in claim 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

Art Unit: 3742

and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

Page 5, line 11-12, “\_\_heating layer characterized in that a volume resistivity of the insulating layer is varied in a plane.” This is not shown in the drawing or explained in detail. It is not clear how volume resistivity is varied ?

Page 5, line 17-21, “\_\_if a volume resistivity of the insulating layer is varied in a plane, the electrostatic absorption power at the time of absorbing the wafer to the heating apparatus can be changed in a plane and can be controlled.” It is not clear how this will take place. Detail description along with additional drawings is required.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 3742

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 5-6, 8, 10, 12-13, 15 of copending Application No. 10/465,324. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims are written using different words. The referenced copending application and the instant application are claiming common subject matter, as follows: a heating apparatus with electrostatic attraction function, comprising at least a supporting base of graphite, a protective layer composed of pyrolytic boron nitride coated by chemical vapor deposition formed on the supporting base, an electrode for electrostatic attraction and a heating layer formed on the protective layer, and an insulating layer of a pyrolytic boron nitride composition containing carbon formed on the electrode for electrostatic attraction and the heating layer, wherein the electrode for electrostatic attraction and/or the heating layer are/is composed of pyrolytic graphite and the insulating layer has an electric resistivity of  $10^8$ - $10^{13}$  Q cm.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3742

7. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 9-10, “\_\_\_ a volume resistivity of the insulating layer is varied in a plane.”

Claim 2, line 4, “\_\_\_ a variation in a shape of a concentric circle.”

Claim 19, line 7-8, “a volume resistivity may be varied in the insulating layer.”

Above described limitations are not clear to the examiner because specification does not describe in detail and does not show in the drawings. Therefore examination is performed based on an electric resistivity of the insulating layer varies.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Honma (US5748436).

Honma discloses a heating apparatus (10) with electrostatic attraction function, comprising at least a supporting base (21) of graphite, a protective laver (23) composed of pyrolytic boron nitride coated by chemical vapor deposition formed on the supporting base, an electrode (24a, 24b) for electrostatic attraction and a heating layer (25) formed on the protective laver, and an insulating layer (26) of a pyrolytic boron nitride composition containing carbon formed on the electrode for electrostatic attraction and the heating layer, wherein the electrode

Art Unit: 3742

for electrostatic attraction and/or the heating layer are/is composed of pyrolytic graphite and the insulating layer has an electric resistivity of  $10^8$ - $10^{13}$  Q cm.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honma (US5748436) in view of Kano (JP 2001015251 A).

Honma discloses a heating apparatus (10) with electrostatic attraction function, comprising at least a supporting base (21) of graphite, a protective layer (23) composed of pyrolytic boron nitride coated by chemical vapor deposition formed on the supporting base, an electrode (24a, 24b) for electrostatic attraction and a heating layer (25) formed on the protective layer, and an insulating layer (26) of a pyrolytic boron nitride composition containing carbon formed on the electrode for electrostatic attraction and the heating layer, wherein the electrode for electrostatic attraction and/or the heating layer are/is composed of pyrolytic graphite and the insulating layer has an electric resistivity of  $10^8$ - $10^{13}$  Q cm.

Honma does not disclose the electrode for electrostatic attraction and/or the heating layer are/is composed of pyrolytic graphite containing boron and/or boron carbide of 0.001-30% by weight in terms of boron concentration.

Kano discloses a ceramic heater comprising a heating layer consisting of pyrolytic graphite wherein the pyrolytic graphite contains boron carbide between 0.001-3 WT % in the

Art Unit: 3742

boron concentration to heighten the anchor effect involving no risk that a protection layer formed on the emission layer exfoliates while the heater in service.

It would have been obvious to one of ordinary skill in the art to provide the electrode for electrostatic attraction and/or the heating layer are/is composed of pyrolytic graphite containing boron and/or boron carbide of 0.001-30% by weight in terms of boron concentration as taught by Kano for the heating apparatus of Honma to heighten the anchor effect involving no risk that a protection layer formed on the emission layer exfoliates while the heater in service.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod D. Patel whose telephone number is 703-308-5227. The examiner can normally be reached on 7.30 A.M. TO 4.00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP

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Patent Examiner  
Art Unit 3742

*9-27-04*  
*Robin O. Evans*  
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